

**ENVIRONMENTAL ASSESSMENT**

**GRAZING AUTHORIZATION**

**For**

**Allotment 65020**

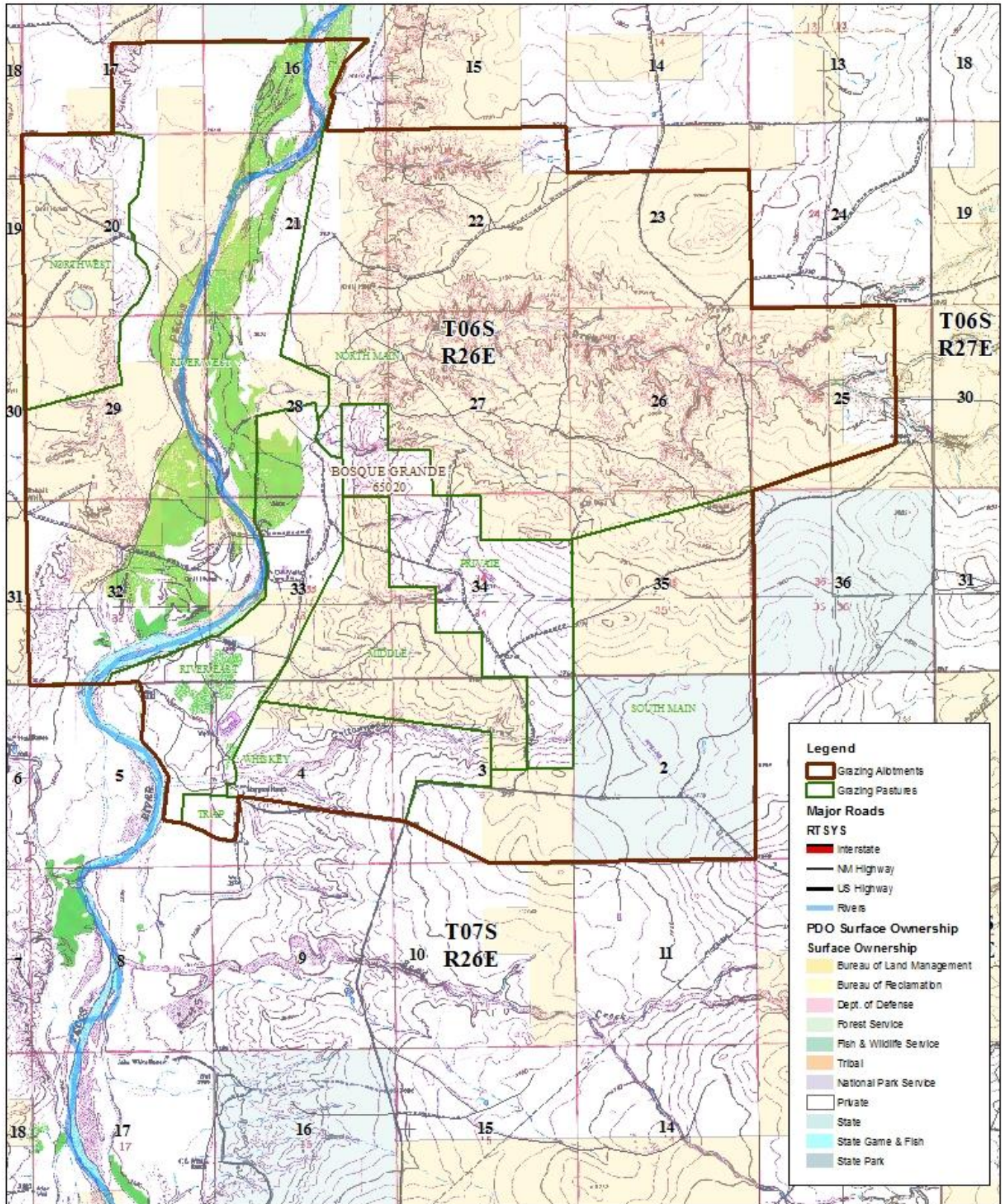
**(See Map for Location)**

**DOI-BLM-NM-P010-2013-053-EA**

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U.S. Department of the Interior  
Bureau of Land Management  
Roswell Field Office  
Roswell, New Mexico

# Allotment 65020 - Bosque Grande



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## **I. BACKGROUND**

### **Purpose and Need for the Proposed Action**

The purpose of issuing a new grazing permit or lease would be to authorize livestock grazing on public range on Allotment 65020, Bosque Grande. When authorizing livestock grazing on public range, the Bureau of Land Management (BLM) must conduct a site-specific NEPA analysis before issuing a lease to authorize livestock grazing. This environmental assessment fulfills the NEPA requirement by providing the necessary site-specific analysis of the effects of issuing a new grazing permit on this allotment. The permit would be needed to specify the types and levels of use authorized, and the terms and conditions of the authorization pursuant to 43 CFR §§4130.3, 4130.3-1, 4130.3-2, and 4180.1.

The scope of this environmental assessment is limited to the effects of issuing a new grazing permit on this allotment. Over time, the need could arise for subsequent management activities which relate to grazing authorization. These activities could include vegetation treatments (e.g., prescribed fires, herbicide projects), range improvement projects (e.g., fences, water developments), and others. Future rangeland management actions related to livestock grazing would be addressed in project specific NEPA documents as they are proposed.

Though this environmental assessment specifically addresses the impacts of issuing a grazing permit on this allotment, it does so within the context of overall BLM management goals. Allotment management activities would have to be coordinated with projects intended to achieve those other goals. For example, a vegetation treatment designed to enhance watershed condition or wildlife habitat may require rest from livestock grazing for one or more growing seasons. Requirements of this type would be written into the permit or lease as terms and conditions.

Current permitted use was based on long term monitoring and rangeland conditions and on a 1996 livestock-use agreement that authorized grazing of 160 animal units (AUs), which corresponds to 1266 animal unit months (AUMs).<sup>1</sup> Total permitted use included three AUs (41 AUMs) yearlong at 100 percent on the River East Pasture, plus 157 AUs (1225 AUMs) distributed yearlong among the other pastures at 65 percent public range.

### **Conformance with Land Use Planning**

The proposed action conforms to the 1997 Roswell Approved Resource Management Plan (RMP) and Record of Decision; and the 2000 New Mexico Standards for Public Land health and Guidelines for Livestock Grazing Management and Record of Decision as required by 43 CFR 1610.5-3.

### **Relationships to Statutes, Regulations, or Other Plans**

The proposal to renew the livestock grazing permit on this allotment is in conformance with the 1994 Environmental Impact Statement for Rangeland Reform; the Federal Land Policy and Management Act of 1976 (FLPMA) (43 U.S.C. 1700 et seq.); the Taylor Grazing Act of 1934 (TGA) (43 U.S.C. 315 et seq.); the Public Rangelands Improvement Act of 1978 (PRIA) (43 U.S.C. 1901 et seq.); the Clean Water Act (33 U.S.C. 1251 et seq.), as amended; the Endangered Species Act (16 U.S.C. 1535 et seq.) as amended; the Public Rangelands Improvement Act of 1978 (43 U.S.C. 1901 et seq.); Executive Order 11988, Floodplain Management; and Executive Order 11990, Protection of Wetlands.

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<sup>1</sup> For a cattle operation, an animal unit (AU) is defined as one cow with a nursing calf or its equivalent. An animal unit month (AUM) is the amount of forage needed to sustain that cow and calf for one month.



## II. PROPOSED ACTION AND ALTERNATIVES

### A. Proposed Action (No Action) - Current Livestock Management

The proposed action is to issue a term permit to graze cattle and horses on this allotment and authorizes grazing of 175 AUs, which corresponds to 1260 AUMs distributed yearlong among the pastures at 60 percent public range.

Additionally a rangeland health assessment has been completed and the allotment meets the Standards for Public Land Health. See Table 1 below for details of the allotment.

<b>Table 1. Animal Units/Animal Unit Months</b>							
<b>Allotment Number</b>	<b>Allotment Name</b>	<b>Acres of Public Land</b>	<b>Percent Public Land</b>	<b>Animal Units Authorized</b>	<b>Animal Unit Months Authorized</b>	<b>Livestock</b>	<b>Livestock Number</b>
65020	Bosque Grande	6,290	60%	174	1253	Cattle	174
65020	Bosque Grande			1	7	Horse	1
<b>Totals</b>		<b>6,290</b>		<b>175</b>	<b>1260</b>		<b>175</b>

There would be no changes from current livestock management as conducted by the current allottee, or to existing range improvements already in place. Future projects or activities identified by the allottee or the BLM can still be considered for implementation. Rangeland monitoring along with other established resource monitoring work would continue on the allotment and changes to livestock management would be made as necessary. If new information surfaces that livestock grazing or livestock-related impacts are negatively impacting other resources, actions will be taken to mitigate those impacts.

### B. BLM Preferred Alternative - Modified Livestock Management

Permitted use would be the same as described under the Proposed Action.

Alternative B focuses on the health of the Pecos River floodplain and associated riparian and aquatic habitat as part of the overall rangeland health considerations for the allotment. This alternative would carry forward the following term and condition into the permit:

Continue to cooperatively implement the allotment management plan to include seasonal use of the riparian area along the Pecos River, and the implementation of a rest-rotation grazing system. This would require the evaluation and monitoring of existing improvements and their efficacy in supporting the rotational grazing system. Continuation of the plan would begin upon issuance of the permit. The plan includes rangeland health objectives which reflect floodplain, riparian and wildlife habitat concerns. Management actions proposed in the AMP may require modification of the terms and conditions of the permit. Through consultation, coordination and cooperation between participants, the plan could be amended or supplemented by mutual agreement.

### C. No-Grazing Alternative

Under this alternative a new grazing permit would not be issued for this allotment. No grazing would be authorized on federal land on this allotment under this alternative. Under this alternative and based on the land status pattern within the allotment, approximately 19.5 miles of new fences would be required to exclude grazing on the federal land.

## **Alternatives Considered But Not Analyzed**

Grazing with reduced numbers – BLM considered authorizing grazing with reduced numbers on this allotment. Grazing with reduced numbers would produce impacts similar to the proposed action. Additionally, this allotment meets the Standard for Public Land Health and monitoring studies do not indicate changes are necessary. Therefore, BLM will not analyze this alternative.

## **III. AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS**

### **General Setting**

This allotment is located along the Pecos River, in Chaves County about 22 miles northeast of Roswell. The Pecos River, flows north-to-south through a broad alluvial valley on the western portion of the allotment. The area west of the river rises from the valley floor to low terraces that are dissected by numerous small draws. Bosque Draw and Cottonwood Draw are major drainages dissecting high terraces to the east. Elevations range from about 3582 feet on the downstream end of the river to 3894 feet at Bosque Peak. See Location Map.

The climate is semi-arid with normal annual temperatures ranging from 20°F to 95°F, extremes of 29 below zero to 113 degrees are also possible. Annual precipitation can range from as low as 3 inches to a high of 21 inches, with an average of about 13-16 inches in the form of rainfall and snow.

### **Affected Resources**

The following resources or values are not present or would not be affected by the authorization of livestock grazing on these allotments: Areas of Critical Environmental Concern, Cultural Resources, Native American Religious Concerns, Visual Resources, Prime or Unique Farmland, Minority/Low Income Populations, Hazardous or Solid Wastes, Wild and Scenic Rivers, and Wilderness. Cultural resources are not usually adversely affected by livestock grazing, although concentrated livestock activity such as around livestock water troughs can have adverse effects on the cultural resource. Prior to authorizing range improvements, a Class III Cultural Survey must be completed ensuring cultural resources will not be affected. There are several known cultural resources within these allotments. Affected resources and the impacts resulting from livestock grazing are described below.

### **Livestock Management**

#### Affected Environment

In the past, this allotment has been permitted to be grazed yearlong by cattle with a small percentage of horses. The current permit authorized 175 AUs based on a 2003 permit review in which private land that was previously excluded were then included as part of the allotment. The allotment contains about 6,290 acres of public land (see Location Map). Landownership is intermingled with private land. Current range improvement projects for the management of livestock include earthen tanks, wells, and several drinking troughs with associated pipelines, pasture and boundary fences and corrals.

The allotment consists of six pastures ranging from 439 acres to 3,441 acres in size (see map and Table 1). The pastures include approximately 6,000 acres of federal land, 640 acres of state land, and 2,300 acres of private land, of which 140 acres is uncontrolled by the permittee (i.e., not owned by the permittee, but not fenced apart from the allotment). Most of the public range is in the North Main, Middle, and River West Pastures. There are 142 acres of public land in the River East Pasture. A 640-acre, fenced, private pasture located in the center of the allotment is included as part of the grazing allotment.

Generally, the current livestock management practice used by the permittee is a simple rotation scheme, with most of the herding activity conducted from the east side of the river. Livestock are run in three herds. The uplands in North Main, South Main and Middle pastures are grazed during the winter months of

November through February. Livestock is then moved to the bottomland in River East and River West pastures and remain there during the spring and summer months of March through October. The Private Pasture may be grazed along with South Main Pasture.

Livestock grazing is currently spread between Middle and River East Pastures due to the lack of water in Middle Pasture. The original source of water in Middle Pasture was a windmill on private lands not belonging to permittee. It was cut off from livestock use when the private land was fenced apart from the allotment (Private Pasture). Since then, the fence separating River East Pasture and Middle Pasture has not been maintained. The farmlands in River East Pasture are not being irrigated at this time. Whiskey Pasture is used as a trap for heifers.

**Table 1. Summary of Allotment Pastures**

Pasture Name	Acres	Pasture Description
North Main	3441	Uplands, breaks, bottomlands dissected by Bosque Draw; mainly BLM
South Main	1440	Uplands; one section state & one section BLM land; small amount private
Middle	550	Bottomland just north of Cottonwood Draw; predominantly BLM land
Whiskey	439	Cottonwood Draw on north side of pasture; predominantly private land
River East	710	Floodplain east of the Pecos River; predominantly private land
River West	3068	Floodplain and low terraces west of river; mixed BLM and private land
Allotment Total	9648	
Private Pasture	640	Private inholding in the center of Allotment 65020

The allotment was placed initially in the "I" Category in 1982 based on rangeland monitoring studies established by the BLM. Generally, an I-category (Improve) designation indicates that the allotment met any of the following 3 conditions: the allotment (1) has a potential significant resource conflict, (2) has high potential for improvement in forage production and a range condition rating of 50 or less, or (3) has a range condition rating of 50 or less and a static or declining range trend.

As shown by the data collected from 1981 through 1995, ecological condition ratings reflect an upward trend from 44 to 56 (BLM 1998). The allotment would remain in the "I" Category because of the potential significant resource conflict.

Range improvements for the management of livestock include several earthen tanks, two windmills, and drinking troughs with associated pipelines, pasture and boundary fences, and corrals. Several water developments and fence lines identified on the official grazing allotment maps may have been built 60 years ago and need to be replaced. The majority of the range improvements are privately owned.

Headquarters well is the most dependable base water on the allotment, qualifying the permittee for livestock grazing privileges on public lands under the Taylor Grazing Act. The Pecos River is not designated as a base water for the allotment. Vegetation treatments were prescribed in the 1986 CMP. A broom snakeweed control project involving about 1661 acres in North Main Pasture was conducted in 1987 by the BLM. Bosque Draw was excluded from the treatment. The control of broom snakeweed and response of grasses and other vegetation resulting from the treatment were favorable.

Rayless goldenrod, a deciduous half-shrub that is poisonous to cattle during the dormant season (first frost to greenup), is found in scattered areas in the bottomlands. Typically, livestock operators will remove cattle during this time to prevent poisoning. In this particular case, the operator grazes cattle during the dormant season with apparently no significant losses.

River West Pasture was incorporated into the allotment in 1994. Prior to the addition of this pasture, a new fence was constructed by the permittee between River West Pasture and North Main Pasture. An interior pasture fence on the west side of the river is down in several areas, therefore, River West Pasture is effectively one large riparian pasture taking in both sides of the river. Cattle depend heavily on the Pecos River as a water source, and the riparian area for forage during dry periods when it is unavailable in the uplands. Cattle are naturally drawn to the bottomlands because of the availability of food, water, and shade. Management of livestock in River West Pasture is affected by the size of the pasture, dense saltcedar stands, and lack of water in the uplands. Cattle continue to congregate in the bottomlands of the pasture. In addition, cattle can move off the allotment along the river because it is difficult to maintain water gaps (i.e., fences across the river) during flooding events.

### Environmental Impacts

Under the Proposed Action, livestock would continue to graze public lands within the allotment under a grazing scheme implemented by the permittee. Existing pasture configurations and water developments would remain the same. Livestock management would incorporate a single-herd rotation system. This is generally to graze the bottomlands (River Pastures) during the spring/summer months (May 1 through November 1) and the uplands (Middle, Whiskey, Cooper, South Main and North Main) during the winter months (November 1 through April 30). Livestock grazing pressure would continue in the riparian area in River West Pasture due to the size of the pasture, lack of water sources on the uplands, and the difficulty of managing herds from the east side of the river. Forage utilization on the uplands would remain low because cattle would continue to congregate in the bottomlands. Existing pasture configurations and water developments would remain the same and would limit grazing management flexibility and might hinder implementation of a rest-rotation system. Some pasture fences, particularly along the river, are in disrepair and would continue to limit the control of livestock.

Under Alternative B, livestock management generally follow Alternative A and would include a double stocking rest-rotation grazing scheme where livestock would be in Middle, Whiskey, Cooper and South Main for three months, and then to North Main for three months (a total of six months). Pasture configurations could be changed and would require an evaluation of existing fences for abandonment or reconstruction. New fences and water developments may be proposed for construction. Overall, livestock utilization would be more evenly spread throughout the allotment and would afford rest to the riparian area at least six months of the year to include a portion of the growing season. Vegetation treatments would be proposed, and livestock would be deferred from these pastures as specified in the project proposal.

Under No-Grazing Alternative, there would be no livestock grazing authorized on public lands. The public lands would have to be fenced apart from the private lands or livestock would be considered in trespass if found grazing on public land (43 CFR 4140.1(b)(1)). Exclusion of livestock from the public land would require approximately 19.5 miles of new fence at an approximate cost of \$234,000.00 (\$12,000.00/mile). This expense would be borne by the private landowner. Range improvements on public land would not be maintained and the BLM would have to compensate the permittee if any of the improvements were cost shared at the time of their authorization.

Under No-Grazing Alternative, the overall livestock operation could be reduced by 105 AUs (those attached to the public lands) to approximately 70 AUs. This would have an adverse economic impact on the permittee and the county. Cumulative impacts of the grazing and no grazing alternatives were analyzed in Rangeland Reform '94 Draft Environmental Impact Statement (BLM and USDA Forest Service 1994) and in the Roswell Resource Area Draft RMP/EIS (BLM 1994). The no livestock grazing alternative was not selected in either document.

## Vegetation

### Affected Environment

Allotment 65020 is comprised of several vegetation community types arranged in a mosaic over the allotment: (1) Grassland; (2) Mixed Desert Shrub; (3) Drainages, Draws and Canyons( DDC); and (4) Riparian/Wetland. The allotment is characterized as a riparian allotment because of its proximity to the Pecos River. Riparian vegetation, primarily found within the floodplain of the river, is discussed in the Riparian/Wetland section of this environmental assessment.

Grasslands are intermixed with all community types. Alkali sacaton is common in the bottomlands, and is interspersed with saltcedar and cottonwood within the floodplain. Tobosa and burrograss occur in the bottoms of draws and swales. Upland habitat of the allotment can be characterized as a mesquite-dominated grassland since mesquite has become a major component of the vegetative community.

The Mixed Desert Shrub community is found on the uplands and rough breaks above the bottomlands. Black grama and dropseed constitute the primary grass species, and other plants of the Chihuahuan desert biome are represented.

The DDC community is comprised of the major drainages crossing the allotment. The largest drainages are Bosque Draw and Cottonwood Draw that enter the river from the east. Numerous smaller drainages are found on both sides of the river that make up the breaks between the upland and bottomland. Vegetation within the large drainages support scattered cottonwood, saltcedar and mesquite. The breaks support characteristic mixed-desert-shrub species such as indigo bush, yucca, fourwing saltbush and mesquite.

General objectives or guidelines for each vegetation community are described in the Roswell Approved RMP and Record of Decision (BLM 1997) and the Roswell Draft RMP/EIS (BLM 1994). Rangeland monitoring studies have been established in key areas within the allotment. Table 2 below lists the key areas, identified by the vegetation ID number, within each allotment as well as the ecological site associated with each key area. These permanent sites are used to track vegetation changes and to determine proper stocking rates.

<b>Table 2. Key Areas</b>		
<b>ALLOTMENT NAME AND NUMBER</b>	<b>KEY AREA</b>	<b>ECOLOGICAL SITE</b>
65020 – Bosque Grande		
Pasture Name		
North Main	304	Sandy Loam CP-2
	6157	Gravelly Loam CP-2
South Main	1145	Sandy SD-3
Middle	311	Gravelly CP-2
River East	1144	Bottomland SD-3
	306	Bottomland SD-3
River West	958	Sandy Bottomland SD-3
	1146	Bottomland SD-3
	1147	Gravelly SD-3
Whiskey	305	Sandy SD-3

The description for the ecological sites was developed by the in their ecological site guides. Ecological site descriptions are available for review at the Roswell BLM office, any Natural Resources Conservation Service office or accessed at [www.nm.nrcs.usda.gov](http://www.nm.nrcs.usda.gov). The percent bare ground and rock found on the allotment fall within the parameters established by the RMP/EIS for this vegetative community. Copies of the monitoring data and the analysis of the data are available at the Roswell Field Office. Rangeland Health



Assessment data was collected in fiscal year 2013. Analysis of the rangeland health assessments indicates that all three indicators (biotic, hydrology, and soils) have been met for the allotment. For a detailed analysis please contact the Roswell Field Office to review a copy of the Rangeland Health Assessment.

**Noxious and Invasive Weeds:** Noxious weeds affect both crops and native plant species in the same way, by out-competing for light, water and soil nutrients. Losses are attributed to decreased quality and quantity of agricultural products due to high levels of competition from noxious weeds and infestations. Noxious weeds can negatively affect livestock productivity by making forage unpalatable to livestock thus decreasing livestock productivity and potentially increasing producer's feed costs. Potential noxious weed species include musk thistle and Russian knapweed. Russian knapweed, hoary cress and musk thistle are documented along US Highway 285. There are known populations of Salt Cedar on the allotment.

### Environmental Impacts

Under the proposed action the vegetation in the Mixed Desert Shrub and Grassland community will continue to be grazed and trampled by domestic livestock as well as other herbivores. The area has been grazed by livestock since the early part of the 1900's, if not longer. Ecological condition and trend is expected to remain stable and/or improve over the long term at the permitted number of livestock.

Upland sites would reflect a static ecological condition trend at the existing permit level. Some grassland areas would remain static due to the influence of mesquite. In the long term, mesquite treatments may be necessary to ebb the encroachment of mesquite onto historical grassland sites.

Range monitoring data indicate that the vegetation is sustainable to meet multiple resource requirements and forage at the permitted use level under the Proposed Action. Data indicate that livestock grazing is compatible with vegetation cover and composition objectives. In addition to the upward trend in ecological condition, monitoring data show the vegetative resources have been improved and sustained since monitoring began in 1981.

Under the No-Grazing Alternative, no impacts to vegetation resources would occur on public lands from authorized livestock grazing. Vegetation cover would increase over the long term in some areas. Grasslands in the uplands would increase in cover and composition, but composition would be tempered by mesquite somewhat dominating the shrub component. Alkali sacaton in the bottomlands would, in the short term, increase in cover and composition but would then taper off in the long term, becoming decadent from the lack of standing vegetation removal by grazing.

## **Soils**

### Affected Environment

The following soil surveys were used to describe and analyze impacts to soils on these allotments: The Soil Survey of Chaves County New Mexico, Northern Part (USDA Soil Conservation Service (1983). There are several soil map units represented on the allotment that cover the BLM owned lands: The soil units covering the most area are described below in Table 3, more in depth information can be found in the soil survey.

### Environmental Impacts

Under the Proposed Action or Alternative B, livestock would remove some of the cover of standing vegetation and litter, and compact the soil by trampling. If livestock management were inadequate, these effects could be severe enough to reduce infiltration rates and increase runoff, leading to greater water erosion and soil losses (Moore et al. 1979, Stoddart et al. 1975). Producing forage and protecting the soil from further erosion would then be more difficult. The greatest impacts of removing vegetation and trampling would be expected in areas of concentrated livestock use, such as trails, waters, feeders, and shade.

<b>Table 3. Soil Units</b>	
<b>ECOLOGICAL SITES</b>	<b>SOIL DESCRIPTIONS</b>
<b>Gravelly CP-2 Torriorthents-Philder-Rock outcrop complex, moderately steep slopes (TPD)</b>	Slopes can be from 0 to 30 percent The Torriorthents and Rock outcrops are on elevation breaks and escarpments and the Philder soil is on high terraces The Torriorthents are shallow and well drained. They are formed in calcareous alluvium and residuum. Bedrock under these soils is found at a depth of 10 inches. Permeability is moderately rapid, available water capacity is very low. Effective rooting depth is 6 to 20 inches. Runoff is medium to rapid and the hazard of water erosion is high. The hazard of soil blowing is high. The Philder soil is shallow and well drained and formed in calcareous alluvium. Permeability is moderate. Available water capacity is very low. Effective rooting depth is 4 to 9 inches. Runoff is rapid, and the hazard of water erosion is high. The hazard of soil blowing is high. Rock outcrop is exposures of sandstone. It supports little if any vegetation. Surface runoff is rapid.
<b>Sandy Loam CP-2 Ratliff-Redona association, gently undulating (RBA)</b>	Slopes on this association are from 0 to 2 percent. The Ratliff soil is on alluvial side slopes and low ridges and the Redona soil is in depressional areas. The Ratliff and the Redona soils are deep and well drained They formed in calcareous alluvium. Permeability is moderate with a high available water capacity. Effective rooting depth is 60 inches or more. Runoff is slow and the hazard of water erosion is slight. The hazard of soil blowing is high.
<b>Sandy SD-3 Sotim-Berino association, gently undulating (SMA)</b>	Slopes in this association are from 0 to 2 percent. The Sotim soils are found on alluvial side slopes and low ridges while the Berino soils are in depressional areas. The soils in this association are deep and well drained. The Sotim soil is formed in calcareous alluvium, while the Berino soil formed in alluvial and eolian deposits. Permeability of the Sotim soil is moderately slow while permeability of the Berino soil is moderate. Available water capacity is high to very high. Effective rooting depth is 60 inches or more. Runoff is medium and the hazard of water erosion is moderate. he hazard of soil blowing is high.
<b>Bottomland SD-3 Glendale-Pecos-Harkey association (GPA)</b>	This map unit if on the flood plain of the Pecos River. It demonstrates slopes of 0 to 1 percent. This association of soils is deep and well drained. They are formed in calcareous alluvium, stratified, calcareous, saline alluvium and loamy, calcareous alluvium. Permeability is very slow in the Pecos soil, moderately slow in the Glendale soil and moderate in the Harkey soil. Available water capacity is high to very high. Effective rooting depth is 60 inches or more throughout this association. Runoff is medium to rapid and the hazard of water erosion is moderate to high. The hazard of soil blowing is high. This association is rarely flooded, but some areas may be inundated for short periods of time during flash floods. Damage to the soil is generally minimal.
<b>Sandy Bottomland SD-3 Ustifluvents, frequently flooded, nearly level (USA)</b>	These deep, somewhat poorly drained, frequently flooded soils are on flood plains along the Pecos River. They are formed in alluvium with slopes of 0 to 2 percent. Permeability here is slow to moderate. Available water capacity is high. Effective rooting depth is 60 inches or more. Runoff is medium and the hazard of water erosion is moderate. The hazard of soil blowing is high. These soils are subject to frequent periods of flooding in spring and summer.
<b>Gravelly SD-3 Yturbide loamy sand, 7 to 13 percent slopes (YtC0)</b>	This is a deep and excessively drained soil found on the terrace fronts along the Pecos River. The soil is formed in alluvium. Permeability here is rapid. Available water capacity is very low. Effective rooting depth is 60 inches or more. Runoff is slow, and the hazard of water erosion is slight. The hazard of sol blowing is very high.

Under the Proposed Action (no action) rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the soil from erosion. Low/moderate forage quality plants provide protection to the soils resource. Cumulative long term monitoring data reflect the soils are being adequately protected.

Under No-Grazing Alternative, any adverse impact from livestock grazing would be eliminated. However, it is possible that removing grazing animals from an area where they were a natural part of the landscape could result in poor use of precipitation and inefficient mineral cycling (Savory 1988). Bare soil could be sealed by raindrop impact, and vegetation could become decadent, inhibiting new growth. Therefore, the results of no grazing could be similar to those of overgrazing in some respects.

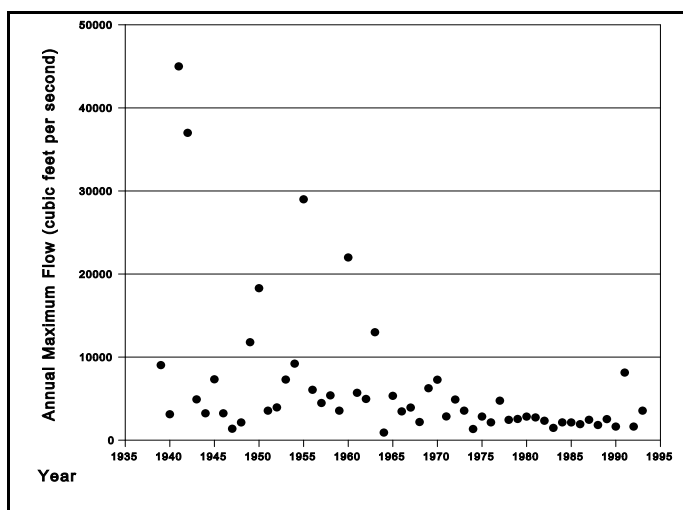
## **Floodplains**

### Affected Environment

The properties of any stream or river are due to the interaction of its channel geometry, streamflows, sediment load, channel materials and valley characteristics (Rosgen 1996). The form and fluvial processes of the Pecos River have been modified by the construction of dams, which have drastically altered the streamflow and sediment regimes of the river. Flooding is less frequent and less severe than prior to dam construction, and sediment loads have been greatly reduced (see Figure 1). As a result, the channel has become moderately entrenched, and exhibits much less lateral migration.

Flow regulation with the dams has also changed the extent, character, and condition of the riparian area on the river (Durkin et al. 1994). Sediment deposition on floodplains is important for riparian succession, and seasonal flooding is required for obligate riparian vegetation.

For administrative purposes, the 100-year floodplain provides the basis for floodplain management on public lands. It is based on Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (1983). The 100-year floodplain of the Pecos River covers approximately 1880 acres on Allotment 65020, including 640 acres of BLM land and 1240 acres of private land. Floodplains are absent in the deep draws draining to the river. Current development on the floodplain consists of about five miles of roads, several producing gas wells, and seven miles of fence within the allotment.



### Environmental Impacts

The reduction in the frequency and magnitude of peak flows on the river would continue to be the primary influence on floodplain function. Whether or not grazing is authorized would have little additional influence.

There would be little change to the level of development on the Pecos floodplain under the Proposed Action. Roads and fences would continue to be used and maintained. Development unrelated to livestock grazing (e.g., natural gas production) would be unaffected.

Under the No-Grazing Alternative, some roads could be abandoned and fences removed. Vegetation cover and diversity would probably increase somewhat. Localized impacts, such as cow trails, may revegetate over time.

Livestock grazing under the Proposed Action would not add to cumulative effects to the floodplain beyond the current level of development. The No-Grazing Alternative could slightly improve floodplain function because vegetation cover would increase, and some roads and fences might be removed or abandoned.

The expected improvement would not be significant because current impacts are minor compared to all other impacts to the floodplain (e.g., manipulation of water flows).

Surface disturbance from the development of surface facilities and buried pipelines can result in impairment of the floodplain values from removal of vegetation, removal of wildlife habitat, impairment of water quality, decreased flood water retention and decreased groundwater recharge.

Under the Proposed Action rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the floodplain values. Low/moderate forage quality plants provide protection to the floodplain values. Cumulative long-term monitoring data reflect the floodplain values are being adequately protected.

Under the No Grazing Alternative, any adverse impact from livestock grazing would be eliminated. However, it is possible that removing grazing animals from an area where they were a natural part of the landscape could result in poor use of precipitation and inefficient mineral cycling (Savory 1988). Bare soil could be sealed by raindrop impact, and vegetation could become decadent, inhibiting new growth. Therefore, the results of no grazing could be similar to those of overgrazing in some respects.

## **Riparian/Wetland Areas**

### Affected Environment

Riparian areas are found along the 4.5 miles of the Pecos River on the allotment, primarily in the River West Pasture. Floodplain width ranges from about one-half mile to one mile on the allotment. The riparian vegetation community is tied to landform within the floodplain and is influenced by flooding intervals. The land form is comprised of exposed and stabilized river bars, the floodplain, and terraces.

The river channel is moderately entrenched and slightly confined by the valley. Channel banks are relatively stable, but are actively being cut in some locations. This is most likely due to entrenchment of the channel rather than disturbance associated with land use activities. The channel material is primarily a sand/silt bed with small to medium debris. The stream gradient is relatively flat (0.25 percent).

Riparian vegetation along the river banks include pockets of Baltic rush, threesquare and cattail. Woody vegetation within the lower floodplain include seepwillow, coyote willow, saltcedar, and Russian olive. Alkali sacaton, alkali muhly, and inland saltgrass are the most common grass species. Common forb species include goldenrod, ragweed, Douglas rabbitbrush, prairie sunflower, and white sweetclover. Older cottonwood trees can be found in several areas and typically occur on higher elevation sandbars and terraces above the active floodplain.

About 100 acres within the floodplain of the river is dominated by saltcedar growing in patches, strips, or dense thickets. About 48 acres support cottonwood trees with open canopies. Adjacent upland vegetation is mesquite/alkali sacaton shrubland which is encroaching into the floodplain.

In 1992, the BLM initiated a standard method to assess the functioning condition of riparian areas (BLM 1993). The method uses an interdisciplinary team to consider the interaction of the vegetation, landform/soils, and hydrology. Assessed areas can be classified as "proper functioning condition, functional at risk (upward or downward trend) or nonfunctional."

Riparian areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high water flows, thereby reducing erosion and improving water quality; filter sediment, capture bedload, and aid floodplain development; improve flood-water retention and ground-water recharge; develop root masses that stabilize streambanks against cutting action; develop diverse ponding and channel characteristics to provide the habitat and water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and support greater biodiversity. The functioning condition of riparian-wetland areas is a result of an interaction among

geology, soil, water, and vegetation (BLM 1993).

Proper functioning condition (PFC) was designed to be a quick, qualitative assessment of riparian health. However, it should not be construed as the sole measure of riparian health. Evaluating other resource values, such as watershed condition or wildlife habitat could require more detailed monitoring techniques. For example, quantitative assessments of riparian vegetation and community structure are needed to assess habitat quality for any given wildlife habitat component (e.g., browse condition for mule deer, ground cover for ground-nesting species).

In December 2012, a PFC assessment of the riparian area on the allotment (see Appendix 1) was conducted by BLM. The riparian area on public land was in “proper functioning condition” as defined by the BLM (1993). Livestock were not grazing the riparian area during the BLM assessment.

### Environmental Impacts

Under the Proposed Action, livestock utilization of the floodplain and associated riparian areas along the Pecos River would continue on the allotment. The greatest vegetation impacts would occur at livestock concentration areas such as crossings, shaded areas along the river, and accessible banks and terraces. Some bank sloughing may occur from trampling. Regeneration of cottonwood trees would be hindered by livestock browsing on seedlings. Utilization of grass species such as alkali sacaton would be heavy within the floodplain and along the river due to annual, seasonal use of the area. The lack of pasture rest would also result in decreased vigor of native riparian vegetation and an increase in exotic species in the long term.

Under Alternative B, livestock grazing would continue to be used as a tool to improve plant vigor. The floodplain and associated riparian vegetation would be afforded protection from overutilization by livestock, thus improving the health of the floodplain and riparian community. Alleviating grazing pressure would enhance ground cover and help establish preferred plant species, making habitat improvement projects more successful. Seasonal rest would improve vigor of riparian species and would allow for cottonwood regeneration. Reducing exotic species and seasonally grazing along the river would improve the overall health of the floodplain and riparian areas.

Under Alternative C, vegetation condition within the floodplain would moderately improve and riparian vegetation would greatly improve. Improvement would continue to be limited by reductions in flood flows, and existing exotic species that affect plant composition. Grasses would initially increase, but plant vigor could decline from lack of vegetation removal, making ground cover species rank. Since livestock grazing would not be permitted under Alternative C, range improvement projects such as brush control and exotic species control would be less likely to be implemented through the range program.

## **Watershed – Hydrology**

### Affected Environment

The watershed and hydrology in the area is affected by land and water use practices. The degree to which hydrologic processes are affected by land and water use depends on the location, extent, timing and the type of activity. Factors that currently cause short-lived alterations to the hydrologic regime in the area include livestock grazing management, recreational use activities, groundwater pumping and also oil and gas developments such as well pads, permanent roads, temporary roads, pipelines, and powerlines.

### Environmental Impacts

Livestock grazing management and range improvement projects can result in long-term and short-term alterations to the hydrologic regime. Peak flow and low flow of perennial streams, ephemeral, and intermittent rivers and streams would be directly affected by an increase in impervious surfaces resulting from the construction of the well pad and road. The potential hydrologic effects to peak flow is reduced



infiltration where surface flows can move more quickly to perennial or ephemeral rivers and streams, causing peak flow to occur earlier and to be larger. Increased magnitude and volume of peak flow can cause bank erosion, channel widening, downward incision, and disconnection from the floodplain. The potential hydrologic effects to low flow is reduced surface storage and groundwater recharge, resulting in reduced baseflow to perennial, ephemeral, and intermittent rivers and streams. The direct impact would be that hydrologic processes may be altered where the perennial, ephemeral, and intermittent river and stream system responds by changing physical parameters, such as channel configuration. These changes may in turn impact chemical parameters and ultimately the aquatic ecosystem.

Long-term direct and indirect impacts to the watershed and hydrology would continue for the life of the livestock grazing management and range improvement projects and would decrease once reclamation of the range improvement projects has taken place. Short-term direct and indirect impacts to the watershed and hydrology from access roads that are not surfaced with material would occur and would likely decrease in time due to reclamation efforts.

Under the Proposed Action rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the hydrologic regime. Low/moderate forage quality plants provide protection to the soils resource and hydrologic regime. Cumulative long-term monitoring data reflect the hydrologic regime is being adequately protected.

Under the No-Grazing Alternative, any adverse impact from livestock grazing management and range improvement projects would be eliminated. However, it is possible that removing grazing animals from an area where they were a natural part of the landscape could result in poor use of precipitation and inefficient mineral cycling (Savory 1988). Bare soil could be sealed by raindrop impact, and vegetation could become decadent, inhibiting new growth. Therefore, the results of no grazing could be similar to those of overgrazing in some respects.

## **Water Quality**

### Affected Environment – Surface Water

The allotment straddles approximately 4.5 miles of the Pecos River. Bosque Draw and Cottonwood Draw drain to the river from the east, and numerous small draws drain from the west. This portion of the river is in the reach from Salt Creek to Sumner Dam, which is identified as Segment 2207 by the New Mexico Water Quality Control Commission (WQCC).

Under the authority of the federal Clean Water Act, the WQCC (1995) designated uses for streams in New Mexico. Designated uses for Segment 2207 include fish culture, irrigation, a limited warmwater fishery, livestock watering, wildlife habitat, and secondary contact (e.g., wading).

The WQCC (1995) also established water quality standards to protect the designated uses, and directs periodic water quality assessments to ensure that standards are met. According to the New Mexico Environment Department (NMED), Segment 2207 is currently meeting the standards for all its designated uses (Hogge 1998, NMED 1998a).

### Environmental Impacts – Surface Water

In general, livestock grazing is considered a potential cause of nonpoint source pollution, with sediment as the primary contaminant. Livestock grazing on the allotment, however, not expected to be significant cause of sediment loading to the Pecos River under any management alternative. The NMED conducted an intensive assessment of Pecos River water quality in 1997. They concluded that no water quality standards have been exceeded in the past ten years on Segment 2207 (NMED 1998a). The NMED assessment also considered siltation and stream bottom deposits in evaluating impacts to the threatened Pecos bluntnose shiner and its habitat. The NMED cites a letter from the U.S. Fish and Wildlife Service (USFWS) that sediment conditions alone are not significant contributing factors in the ability of the bluntnose shiner to

survive and reproduce. Instead, upriver reservoirs have trapped sediment and resulted in water exiting the reservoirs that is “starved of sediment.” Therefore, sediment loading due to livestock grazing on the allotment would not be expected to significantly affect water quality under any alternative.

Bacteria and nutrients are other potential contaminants that can be related to livestock grazing. A review of historic water-quality data did not show any evidence of bacteria contamination of the river, but elevated levels of ammonia were noted during sampling in 1986 (NMED 1998a). The level was still below the chronic standard for ammonia established by the state. The Roswell wastewater treatment plant was discharging during sampling, and is believed to have been the principal contributor to the elevated levels of ammonia. Bitter Lake National Wildlife Refuge was also mentioned by the NMED as a possible contributor. Because no water quality standards have been exceeded in more than ten years, livestock grazing on the allotment does not appear to have a significant impact on water quality.

Cumulative impacts to Pecos River water quality from grazing on Allotment 65020 would not be expected to be significant. The intensive assessment of the Pecos River by the NMED also included Segment 2206 (Salt Creek to Rio Peñasco) immediately downstream of Segment 2207. Potential sources of pollutants in Segments 2206 and 2207 include rangelands, irrigation return flows, dairies, municipal and industrial sources, mineral development, road construction and maintenance. Even considering all these potential pollution sources, neither segment had a documented exceedance of any water quality standard.

#### Affected Environment - Ground Water

The allotment lies on the northern legal boundary of the Roswell Underground Water Basin (New Mexico State Engineer 1995). The portion in Township 7 South lies in the basin, but the majority of the allotment in Township 6 South lies north of the basin.

Ground water is found in the alluvial aquifer at depths ranging from less than 10 feet near the river, to more than 65 feet in the uplands (Wilkins and Garcia 1995, Hudson and Borton 1983). Yields of 100 gallons per minute or more are possible from the alluvium (Geohydrology Associates, Inc. 1978). Ground water quality is generally good, though data are limited.

#### Environmental Impacts – Ground Water

Livestock grazing would not be expected to have a significant impact on ground water quality. Livestock would be dispersed over the allotment, and the soil would filter potential contaminants.

The WQCC has the primary responsibility for ground water quality management in New Mexico. In their most recent report on water quality in New Mexico, the WQCC (1996) did not find livestock grazing on rangelands to be an important potential source of contamination to ground water.

Wilson (1981) also presented potential sources of ground water contamination and the relative vulnerability of aquifers in New Mexico. He identified animal confinement facilities (e.g., dairies, feedlots) as potential sources of contamination elsewhere in New Mexico, including areas in the Pecos valley downstream from the allotment. Wilson did not identify livestock grazing on rangelands, however, as an important potential source of ground water contamination.

Cumulative impacts to ground water quality from grazing on Allotment 65020 would be negligible. Grazing impacts would be insignificant when compared to other potential sources of contamination, such as mineral development, saline intrusion, and agriculture.

### **Wildlife**

#### Affected Environment

The allotment provides a variety of habitat types for terrestrial and aquatic wildlife species. The diversity

and abundance of wildlife species in the area is due to the presence of open water, the numerous drainages interconnecting upland habitats to the Pecos floodplain, a mixture of grassland habitat and mixed desert shrub vegetation, and riparian vegetation found within the floodplain of the river.

Numerous avian species use the Pecos River during spring and fall migration, including nongame migratory birds. The Bitter Lake National Wildlife Refuge (BLNWR) is several miles downstream from the allotment, and serves as a major focal point for migratory birds (e.g., ducks, geese, cranes, waterbirds). Common bird species are mourning dove, mockingbird, white-crowned sparrow, black-throated sparrow, blue grosbeak, northern oriole, western meadowlark, Crissal thrasher, western kingbird, northern flicker, common nighthawk, loggerhead shrike, and roadrunner. Raptors include northern harrier, Swainson's hawk, American kestrel, and occasionally golden eagle and ferruginous hawk.

The Pecos River once supported a wide variety of native fish species adapted to the flow regime that existed prior to dam construction, agriculture development, and the introduction of non-native fish species. The greatest impact to fish habitat is the manipulation of water supply to meet irrigation needs. Representative fish species include the red shiner, sand shiner, Arkansas River shiner, Pecos bluntnose shiner, plains minnow, silvery minnow, plains killifish, mosquitofish, speckled chub, river carpsucker and channel catfish.

Common mammal species using the area include mule deer, coyote, gray fox, bobcat, striped skunk, porcupine, raccoon, badger, jackrabbit, cottontail, white-footed mouse, deer mouse, grasshopper mouse, kangaroo rat, spotted ground squirrel, and woodrat. Beaver activity can occasionally be observed in the area. At least thirteen species of bats are known in the area.

A variety of herptiles also occur in the area such as yellow mud turtle, box turtle, eastern fence lizard, side-blotched lizard, horned lizard, whiptail, hognose snake, coachwhip, gopher snake, rattlesnake, and spadefoot toad.

### Environmental Impacts

Under the Proposed Action and Alternative B, livestock grazing management and range improvement projects designed with consideration for wildlife would generally enhance the quality of wildlife habitat. Vegetation condition, forage production, and habitat diversity would improve, and wildlife species distribution and abundance would increase. The construction of livestock waters in some areas would promote increased wildlife distribution and abundance, but may increase grazing pressure in those same areas. Short-term impacts of range improvements would be the temporary displacement of wildlife species during the construction activities.

Under Alternative C, wildlife habitat would moderately improve. Livestock would no longer compete directly with wildlife for forage, browse, and cover. Improvement would continue to be limited by invasive species (e.g., mesquite, snakeweed), which affect plant composition. Since livestock grazing would not be permitted under Alternative C, range improvement projects that benefit wildlife, such as water developments, would be abandoned. New range improvement projects that would also improve wildlife habitat, such as brush control, may not be implemented because these projects are primarily driven and funded through the range program.

### **Threatened and Endangered Species**

The Pecos bluntnose shiner, Pecos gambusia, and interior least tern are federally listed species that occur or have the potential to occur on the allotment. Federally proposed species include the Pecos pupfish and Pecos sunflower. The status and presence of these species in the RFO area are discussed in the following section.

## Pecos Bluntnose Shiner (*Notropis simus pecosensis*) Federal Threatened

### Affected Environment

Historically, the Pecos bluntnose shiner inhabited the Pecos River from Santa Rosa to near Carlsbad, New Mexico. Currently, the subspecies is restricted to the river from the Fort Sumner area southward locally to the vicinity of Artesia, and seasonally in Brantley Reservoir (NMDGF 1988; USFWS 1992). Routine fish community monitoring conducted by the USFWS in the Pecos River between Sumner Dam and Brantley Reservoir show the fish remains generally abundant, especially in light of cooperative efforts between the Bureau of Reclamation and the USFWS to more closely mimic natural flows in the Pecos River.

There are two designated critical habitat areas on the Pecos River within the RFO area. The first is a 64 mile reach beginning about ten miles south of Fort Sumner (Township 1 North), downstream to a point about twelve miles south of the DeBaca/Chaves county line (Township 5 South). The second reach is from Highway 31 east of Hagerman (Township 14 South), south to Highway 82 east of Artesia (Township 17 South).

The primary threat to the Pecos bluntnose shiner appears to be the manipulation of flows in the Pecos River to meet irrigation needs, and the subsequent drying of the river channel (Hatch et al. 1985). High flows in late winter-early spring before natural spring runoff appears to displace fish into marginal downstream habitats, including Brantley Reservoir. Cessation of reservoir releases after spring runoff and before the advent of summer rains desiccates long stretches of the Pecos River. Maintenance of water levels within the Pecos River and its tributaries is beyond the management authority of the BLM.

In addition to the manipulation of flows is the threat posed by non-native fish. The introduction and establishment of species such as the Arkansas River shiner offers direct competition with the Pecos bluntnose shiner.

Livestock grazing does not appear to be a threat to the bluntnose shiner based on a review of the literature. Nor was grazing identified in the Pecos Bluntnose Shiner Recovery Plan as having the potential to adversely affect water quality, and thus the bluntnose shiner (USFWS 1992).

### Environmental Impacts

Under the Proposed Action and Alternative B, livestock grazing impacts to the Pecos bluntnose shiner would be negligible. Under Alternative C, no impacts from livestock grazing would occur. Based on the assessment of Pecos River water quality conducted by the NMED in 1997, it appears that the shiner would not be affected by poor water quality if a grazing permit were issued.

Section 303(d) of the federal Clean Water Act requires that the State identify those waters for which existing required pollution controls are not stringent enough to meet State water quality control standards. The State must then establish total maximum daily loads (TMDLs) for pollutants of these water quality limited stream segments. The presence of critical habitat for the threatened Pecos bluntnose shiner raised the Pecos River to a priority one on the New Mexico 303(d) ranking system.

Segment 2207 (Pecos River from Salt Creek to Sumner Dam) had been listed for TMDL development because of stream bottom deposits. Based on a review of historical data and their survey, however, the NMED (1998a) concluded there was no basis for developing TMDLs on Segment 2207. The NMED (1998b) removed the segment of the Pecos River from the 1998 2000 303(d) list.

NMED's decision to remove Segment 2207 from the 303(d) list bears directly on the Biological Opinion rendered by the USFWS on the Roswell Resource Management Plan. The USFWS cited the New Mexico Water Quality Control Commission's 305(b) report in their opinion. The report identified siltation, reduction of riparian vegetation, and streambank destabilization as among the probable causes for the Pecos River in the RFO area not supporting its designated use as a warm water fishery, and identified rangeland

agriculture as a probable source of the nonsupport. Just as Segment 2207 was removed from the 303(d), the next 305(b) report will no longer list the segment as water quality-limited (Hogge 1998).

#### Pecos Gambusia (*Gambusia nobilis*) Federal Endangered

##### Affected Environment

The Pecos gambusia is endemic to the Pecos River Basin in southeastern New Mexico and western Texas. Historically, the species occurred as far north as the Pecos River near Fort Sumner, and south to Fort Stockton, Texas. Recent records indicate, however, that its native range is restricted to sinkholes and springs and their outflows on the west side of the Pecos River in Chaves County. In spite of population declines, the species remains locally common in a few areas of suitable habitat. The BLNWR and the Salt Creek Wilderness Area contain the key habitat of the species in the RFO area. On the refuge, the gambusia is primarily restricted to springs and sinkholes in the Lake St. Francis Research Natural Area. Endangerment factors include the loss or alteration of habitat (e.g., periodic dewatering) and introduction of exotic fish species (e.g., mosquitofish). Potential impacts to habitat may also occur from surface disturbing activities at sinkholes or springs and their outflows.

##### Environmental Impacts

No impacts to the Pecos gambusia would result from livestock grazing under any Alternative. No springs or seeps exist on BLM land within the allotment that would provide yearlong habitat for the gambusia.

#### Interior Least Tern (*Sterna antillarum athalassos*) Federal Endangered

##### Affected Environment

The interior least tern nests on shorelines and sandbars of streams, rivers, lakes, and man-made water impoundments. Records of breeding terns in New Mexico are centered around BLNWR where the species has bred regularly since it was first recorded in 1949. BLNWR is considered "essential" tern breeding habitat in the state. Besides BLNWR, the only known nesting habitat in the RFO area is an alkali flat due north of the refuge on public lands. These are small populations with only a few nesting terns. Specific surveys for nesting least terns have been conducted in potential habitat along the Pecos River and playas by the New Mexico Natural Heritage Program under a Challenge Cost Share project. No other nesting terns have been found to date. Sporadic observations of least terns have been recorded elsewhere in the Pecos River valley. The tern may occur on public lands in Chaves County along the river because suitable nesting habitat is found on sites that are sandy and relatively free of vegetation (i.e., alkali flats). Approximately 44 potential nesting sites are found throughout the RFO area. Other potential habitat sites are saline, alkaline, or gypsiferous playas that occasionally hold water. However, ephemeral playas do not support fish, the main staple for terns.

##### Environmental Impacts

No impacts to the interior least tern would result from livestock grazing under any Alternative. Recent habitat surveys found no breeding populations in potential nesting habitat that occurs as sand bars within the river channel.

#### Pecos Pupfish (*Cyprinodon pecosensis*) Federal Candidate

##### Affected Environment

The Pecos pupfish is found in a variety of habitats from saline springs and gypsum sinkholes to desert streams with highly fluctuating conditions. Pecos pupfish populations are most dense in gypsum sinkholes on BLNWR. The species apparently thrives in these saline waters that support few other fish species. It occasionally occupies fresher waters in the Pecos River, but is uncommon in such habitats. In the river, the



pupfish is most often found in backwater areas and side pools that lack sunfish or other predators (NMDGF 1988; Sublette et al. 1990; NMDGF 1997). The pupfish also inhabits the Overflow Wetlands Wildlife Habitat Area adjacent to the Bottomless Lakes State Park. Endangerment factors include habitat loss caused by groundwater pumping and channel alterations, hybridization and/or replacement by the sheepshead minnow, and predation by non-native fish species. Potential impacts to habitat may occur from surface disturbing activities at or near springs or seeps. Other activities that severely impact habitat are not within the purview of the BLM, such as transportation and utilization of water associated with agricultural irrigation. Livestock grazing may impact springs or seeps but most of these sites have been protected with exclosures.

### Environmental Impacts

Under the Proposed Action, livestock grazing impacts to the Pecos pupfish would be negligible. Under Alternative B, no impacts from livestock grazing would occur. Conclusions regarding riverine habitat are based on the same information used for the Pecos bluntnose shiner. Suitable sinkhole or spring habitat does not exist on the allotment.

Pecos (Puzzle) Sunflower (*Helianthus paradoxus*) Federal Threatened

### Affected Environment

The Pecos sunflower is found along alkaline seeps and cienegas of semi desert grasslands and short grass plains (4,000 7,500 ft.). Plant populations are found both in water and where the water table is near the ground surface.

In the RFO area, the sunflower is found in only a few areas outside of the BLNWR. In 1994, a new population was found growing on the margins of Lea Lake and its outflow at Bottomless Lakes State Park. Lloyd's Draw, east of the Pecos River, and sites at the Overflow Wetlands Area of Critical Environmental Concern, are the only known larger populations of Pecos sunflower on public land. Endangerment factors include dewatering of riparian or wetland areas where the sunflower is found, surface disturbing activities, and excessive livestock grazing.

Potential habitat for the sunflower occurs on the allotment as low lying areas where the water table is near the ground surface. The low lying areas are not necessarily along the existing river channel, but in old channel courses and oxbows. These areas were invaded by salt cedar growing in dense stands, which may have prevented the viability of the Pecos sunflower. About 540 acres of salt cedar were extracted by mechanical means in 2003 to enhance floodplain and riparian health and to potentially open up habitat for the sunflower. No Pecos sunflower populations have been found on the allotment to date. Other potential sites include a few springs on the east side of the river.

### Environmental Impacts

Under the Proposed Action and Alternative B, potential habitat would remain in unsuitable condition for the Pecos sunflower due to salt cedar. Under the Proposed Action, livestock grazing management and associated habitat improvement projects would enhance potential habitat for the sunflower. Populations of the sunflower may become established following salt cedar control in certain areas.

## **Air Quality**

### Affected Environment

The Environmental Protection Agency (EPA) has the primary responsibility for regulating air quality, including seven nationally regulated ambient air pollutants. Regulation of air quality is also delegated to some states. Air quality is determined by atmospheric pollutants and chemistry, dispersion meteorology and terrain, and also includes applications of noise, smoke management, and visibility.

The allotment is in an area that is considered a Class II air quality area. A Class II area allows moderate amounts air quality degradation. The primary sources of air pollution are dust from blowing wind on disturbed or exposed soil and exhaust emissions from motorized equipment. Air quality in the area is generally good and is not located in any of the areas designated by the Environmental Protection Agency as "non-attainment areas" for any listed pollutants regulated by the Clean Air Act (CAA).

Air quality in the region is generally good, with winds averaging 10-16 miles per hour depending on the season. Peak velocities reach more than 50 miles per hour in the spring. These conditions rapidly disperse air pollutants in the region.

### Environmental Impacts

Air quality would temporary be directly impacted with pollution from enteric fermentation (ruminant livestock), chemical odors, and dust. Dust levels resulting from allotment management activities would be slightly higher under the Proposed Action than No-Grazing Alternative. The cumulative impact on air quality from the allotment would be negligible compared to all pollution sources in the region.

The federal Clean Air Act requires that air pollutant emissions be controlled from all significant sources in areas that do not meet the national ambient Air quality standards. The New Mexico Air Quality Bureau is responsible for enforcing the state and national ambient air quality standards in New Mexico. At the present time, the counties that lie within the jurisdictional boundaries of the Roswell Field Office are classified as in attainment of all state and national ambient air quality standards as defined in the CAA of 1972, as amended.

The Environmental Protection Agency (EPA), on October 17, 2006, issued a final ruling on the lowering of the National Ambient Air Quality Standard (NAAQS) for particulate matter ranging from 2.5 micron or smaller particle size. This ruling became effective on December 18, 2006, stating that the 24-hour standard for PM<sub>2.5</sub>, was lowered to 35 ug/m<sup>3</sup> from the previous standard of 65 ug/m<sup>3</sup>. This revised PM<sub>2.5</sub> daily NAAQS was promulgated to better protect the public from short-term particle exposure. The significant threshold of 35 ug/m<sup>3</sup> daily PM<sub>2.5</sub> NAAQS is not expected to be exceeded under the proposed action.

## **Climate**

### Affected Environment

Climate is the composite of generally prevailing weather conditions of a particular region throughout the year, averaged over a series of years. GHG's and the potential effects of GHG emissions on climate are not regulated by the EPA, however climate has the potential to influence renewable and non-renewable resource management.

Greenhouse gases, including carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>), and the potential effects of GHG emissions on climate, are not regulated by the EPA under the Clean Air Act. However, climate has the potential to influence renewable and non-renewable resource management. The EPA's Inventory of US Greenhouse Gas Emissions and Sinks found that in 2006, total US GHG emissions were over 6 billion metric tons and that total US GHG emissions have increased by 14.1% from 1990 to 2006. The report also noted that GHG emissions fell by 1.5% from 2005 to 2006. This decrease was, in part, attributed to the increased use of natural gas and other alternatives to burning coal in electric power generation.

The levels of these GHGs are expected to continue increasing. The rate of increase is expected to slow as greater awareness of the potential environmental and economic costs associated with increased levels of GHG's result in behavioral and industrial adaptations.

Global mean surface temperatures have increased nearly 1.0°C (1.8°F) from 1890 to 2006 (Goddard Institute for Space Studies, 2007). However, observations and predictive models indicate that average temperature changes are likely to be greater in the Northern Hemisphere. Without additional meteorological

monitoring systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions, but increasing concentrations of GHGs are likely to accelerate the rate of climate change.

In 2001, the Intergovernmental Panel on Climate Change (IPCC) predicted that by the year 2100, global average surface temperatures would increase 1.4 to 5.8°C (2.5 to 10.4°F) above 1990 levels. The National Academy of Sciences (2006) supports these predictions, but has acknowledged that there are uncertainties regarding how climate change may affect different regions. Computer model predictions indicate that increases in temperature will not be equally distributed, but are likely to be accentuated at higher latitudes. Warming during the winter months is expected to be greater than during the summer, and increases in daily minimum temperatures is more likely than increases in daily maximum temperatures.

A 2007 US Government Accountability Office (GAO) Report on Climate Change found that, "federal land and water resources are vulnerable to a wide range of effects from climate change, some of which are already occurring. These effects include, among others: 1) physical effects such as droughts, floods, glacial melting, and sea level rise; 2) biological effects, such as increases in insect and disease infestations, shifts in species distribution, and changes in the timing of natural events; and 3) economic and social effects, such as adverse impacts on tourism, infrastructure, fishing, and other resource uses." It is not, however, possible to predict with any certainty regional or site specific effects on climate relative to the proposed lease parcels and subsequent actions.

In New Mexico, a recent study indicated that the mean annual temperatures have exceeded the global averages by nearly 50% since the 1970's (Enquist and Gori). Similar to trends in national data, increases in mean winter temperatures in the southwest have contributed to this rise. When compared to baseline information, periods between 1991 and 2005 show temperature increases in over 95% of the geographical area of New Mexico. Warming is greatest in the northwestern, central, and southwestern parts of the state.

### Environmental Impacts

Climate change analyses are comprised of several factors, including greenhouse gases (GHGs), land use management practices, the albino effect, etc. The tools necessary to quantify climatic impacts from the Proposed Action are presently unavailable. As a consequence, impact assessment of specific effects of anthropogenic activities cannot be determined. Additionally, specific levels of significance have not yet been established. Therefore, climate change analysis for the purpose of this document is limited to accounting and disclosing of factors that may contribute to climate change. Qualitative and/or quantitative evaluation of potential contributing factors within the planning area is included where appropriate and practicable.

## **Recreation**

### Affected Environment

A network of roads provides access to public, private, and state lands within the allotment, although legal public access is limited. Access to most of the private and state lands is not currently controlled by fences, locked gates, or no trespass signs. The BLM has designated off-highway vehicle use on public lands in the area as limited to existing roads and trails.

The allotment provides habitat for numerous game species including desert mule deer, pronghorn, mourning dove and scaled quail. Predator and feral pig hunting may occur on the allotment, as well as trapping for predators or furbearers. The river is also accessible to the public for fishing or minnow seining.

General sightseeing, wildlife viewing and photography are non-consumptive recreational activities that may occur. Rock collectors find various minerals unique to the area, such as Pecos diamonds.

## Environmental Impacts

Under the Proposed Action, livestock grazing would remain the primary emphasis for management of public lands on the allotment, with most improvements aimed at maximizing this activity. It is expected that some conflict between recreational users and livestock management may occur primarily during the hunting season.

Under the Preferred Alternative, game and non-game wildlife species could realize long-term benefits through the improvement of habitat through projects design to dovetail with livestock management. It is expected that hunter success and wildlife viewing opportunities would be enhanced.

Under No-Grazing Alternative, no conflicts between ranching activities and recreational use would occur on public lands. Success of hunts and non-consumptive opportunities would remain the same or slightly improve. Vandalism could still occur to range improvements. Conflicts with OHV use would continue.

## **Cave and Karst**

### Affected Environment

Allotment 65020 is located in an area of medium potential for the occurrence of caves and karst. Although a comprehensive inventory of cave and karst resources has not been completed for public lands in the RFO, a cave has been reported to be on Allotment 65020. A field check, however, could not verify the existence of a cave.

### Environmental Impacts

Impacts to cave and karst resources are not expected to be significant under any of the alternatives. Though a cave was reported to be on the allotment, its existence could not be confirmed. If the cave exists and was simply missed during the search, significant impacts still would not be expected. The reported cave location would not ordinarily receive heavy livestock use, so grazing authorization on the allotment would probably have little effect even if the cave exists.

It is possible that cave or karst features exist on the allotment, but have not yet been discovered. If a feature is discovered in the future, protective measures could be required to mitigate adverse impacts to the feature. These measures might include fencing, removing structures that affect water movement, closing roads, limiting chemical treatment of vegetation, or other actions.

## **Cultural Resources**

### Affected Environment

The project falls within the Southeastern New Mexico Archaeological Region. This region contains the following cultural/temporal periods: Paleoindian (ca. 12,000-8,000 B.C.), Archaic (ca. 8000 B.C. –A.D. 950), Ceramic (ca. A.D. 600-1540) Protohistoric and Spanish Colonial (ca. A.D. 1400-1821), and Mexican and American Historical (ca. A.D. 1822 to early 20th century). Sites representing any or all of these periods are known to occur within the region. A more complete discussion can be found in *Living on the Land: 11,000 Years of Human Adaptation in Southeastern New Mexico An Overview of Cultural Resources in the Roswell District*, Bureau of Land Management published in 1989 by the U.S. Department of the Interior, Bureau of Land Management.

### Environmental Impacts

Concerning cultural resources, grazing has the potential for impacts. The Roswell Field Office reviews the local office and New Mexico Cultural Resource Information System databases for every grazing permit or leasing action at both the Environmental Assessment level and the Documentation of NEPA Adequacy

level. In situations where sensitive sites lie within an allotment, site specific visits may be conducted to assess the presence of effects. Twenty four surveys and seventeen sites have been reported in this allotment. Currently, there is no evidence that grazing activities at this intensity have adversely impacted any cultural resources; however, unforeseen impacts may occur.

#### Mitigation

Any future range improvement involving earth disturbing activities will require a cultural resource inventory prior to approval.

### **Native American Religious Concerns**

#### Affected Environment

To date, the areas to be affected by the current project have not been identified by interested tribes as being of tribal concern.

#### Environmental Impacts

A review of existing information indicates the proposed action is outside any known Traditional Cultural Property.

### **Paleontology**

#### Affected Environment

Surface disturbances have the potential to affect paleontological resources in the areas known to contain or have the potential to contain paleontological resources, primarily the areas identified through the Potential Fossil Yield Classification (PFYC) system.

#### Environmental Impacts

The proposed action is not located within an area with a high PFYC. Impacts to paleontological resources are not anticipated.

## **IV. CUMULATIVE IMPACTS**

A cumulative impact is defined in 40 CFR 1508.7 as:

“the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”

The specific resources being impacted are limited to those that are most important in terms of impacts resulting from remedial actions needing to be implemented to improve current environmental conditions. The analysis of cumulative impacts is driven by major resource issues. The action considered in this environmental assessment (EA) is the authorization of livestock grazing on Allotment 65020, and the major issues include:

- (1) threatened and endangered species associated with the Pecos River, primarily the Pecos bluntnose shiner,
- (2) Pecos River water quality, and
- (3) riparian/wetland habitat within the Pecos River floodplain.



The incremental impact of issuing a grazing permit on these resources must be analyzed in the context of impacts from other actions. Other BLM actions that could have impacts on the identified resources include: livestock authorization on other allotments along the Pecos River; oil and gas activities on the river floodplain and on the uplands; rights of way crossing the river; and recreation use, particularly off highway vehicles. All authorized activities which occur on BLM land can also take place on state and private land. In addition, significant impacts could result from reservoir management and the manipulation of river flows, and agricultural activities (e.g. dairies, crop production, and irrigation diversions and return flows).

Many of the actions which could contribute to cumulative impacts have occurred over many years. Impacts from open range livestock grazing in the last century are still being addressed today. Sumner Dam, the principal structure controlling river flows in this reach, was built in 1937. Major irrigation projects were begun in the 19th century, and oil and gas activities began in the early part of the 20th century. All these activities are still occurring today, and are expected to continue into the foreseeable future to some degree.

The Proposed Action would not add incrementally to the cumulative impacts to threatened and endangered species, or to Pecos River water quality. The conclusion that impacts to these resources from grazing authorization would not be significant are discussed in detail in Section III of the EA. Incremental impacts to riparian/wetland habitat from livestock grazing are possible, however.

If the No Grazing Alternative were chosen, some adverse cumulative impacts to riparian/wetland habitat would be eliminated, but others would occur. Grazing would no longer be available as a vegetation management tool, and BLM lands within the allotment would be less intensively managed. For example, alkali sacaton in the bottomlands would likely become decadent without livestock impact, and control of exotic plant species such as salt cedar would be less likely without allotment management. Many of the actions which could contribute to cumulative impacts have occurred over many years. Impacts from open-range livestock grazing in the last century are still being addressed today. Oil and gas activities began in the early part of the 20th century. These activities are still occurring today, and are expected to continue into the foreseeable future to some degree.

The analysis of cumulative impacts is driven by major resource issues. The proposed action is the authorization of livestock grazing on these allotments. The cumulative impacts to these allotments and adjacent allotments are insignificant.

While global and national inventories of GHG are established, regional and state-specific inventories are in varying levels of development. Quantification techniques are in development – for example, there is a good understanding of climate change emissions related to fuel usage; however measuring and understanding the effects are less comprehensive. Analytical tools necessary to quantify climatic impacts are presently unavailable. As a consequence, impact assessment of specific effects of anthropogenic activities cannot be determined.

Due to the absence of regulatory requirements to measure GHG emissions it is not possible to accurately quantify potential GHG emissions in the affected areas as a result of renewing grazing leases. Some general assumptions however can be made: livestock, operating vehicles to support livestock grazing, and vehicles transporting livestock contribute to GHG emissions.

The New Mexico Greenhouse Gas Inventory and Reference Case Projection 1990-2020 (Inventory) states agricultural activities, including manure management, fertilizer use and livestock account for 7% of New Mexico's total GHG emissions. The Inventory estimates approximately 6.4 million metric tons GHG emissions are projected by 2010 from all agricultural activities in the state. The Inventory states that GHG emissions from livestock, agriculture soil management and field burning were about 6.2 MMT of CO<sub>2</sub> equivalents in 2004. The Inventory makes the assumption that dairy cattle production will grow at the same rate as the general population and no growth in the other categories within agriculture.

The lack of scientific tools designed to predict climate change on regional or local scales limits the ability to quantify potential future impacts. However, potential impacts to natural resources and plant and animal species due to climate change are likely to be varied, including those in the southwestern United States. For example, if global climate change results in a warmer and drier climate, increased particulate matter impacts could occur due to increased windblown dust from drier and less stable soils. Cool season plant species' spatial ranges are predicted to move north and to higher elevations, and extinction of endemic threatened/endangered plants may be accelerated.

Due to loss of habitat or competition from other species whose ranges may shift northward, the population of some animal species may be reduced or increased. Less snow at lower elevations would likely impact the timing and quantity of snowmelt, which, in turn, could impact water resources and species dependent on historic water conditions. Forests at higher elevations in New Mexico, for example, have been exposed to warmer and drier conditions over a ten year period. Should the trend continue, the habitats and identified drought sensitive species in these forested areas and higher elevations may also be more affected by climate change.

## **V. MITIGATION MEASURES**

Vegetation monitoring studies will continue if a new grazing permit was issued under the Proposed Action. Changes to livestock management would be made if monitoring data showed adverse impacts to the vegetation.

If new information surfaces that livestock grazing is negatively impacting other resources, action will be taken at that time to mitigate those impacts.

## **VI. RESIDUAL IMPACTS**

Residual impacts are direct, indirect, or cumulative impacts that would remain after applying the mitigation measures. Residual impacts following authorization of livestock grazing would be insignificant if the mitigation measures are properly applied.

## **VII. Socio-Economic Factors**

The Proposed Action and Preferred Alternative B as outlined in this document are not anticipated to alter the socio-economic conditions for either the permittee or Chaves County. Should the No-Grazing Alternative be adopted, economic impacts would occur. Chaves County would lose tax revenues on approximately 105 head of cattle annually.

Under the No-Grazing Alternative, it would be the responsibility of the permittee to prevent livestock from grazing on the public lands. To accomplish this, the permittee would most likely have to construct fences to exclude the public land. Approximately 19.5 miles of new fence would be needed at a cost of approximately \$234,000.00 (\$12,000.00/mile). BLM would also have to provide compensation to the permittee for their interest in authorized range improvements due to the exclusion of livestock grazing. These costs could be reduced or mitigated by land exchanges with either the state or the permittee to block up the public land.

## **IX. BLM Team Members**

Helen Miller - Rangeland Management Specialist  
Adam Ortega - Rangeland Management Specialist  
Emily Peterson – Rangeland Management Specialist  
Kyle Arnold - Rangeland Management Specialist  
Mike McGee - Hydrologist  
Jeremy Iliff - Archaeologist  
Glen Garnand – Environmental Coordinator  
Mike Bilbo – Outdoor Recreation Planner  
Knut Peterson – Cave Specialist  
Dan Baggao – Wildlife Biologist  
Al Collar – Geologist

## **X. PERSONS AND AGENCIES CONSULTED**

New Mexico Department of Game and Fish  
New Mexico Energy, Minerals, and Natural Resources Department  
- Forestry and Resource Conservation Division  
New Mexico Environment Department - Surface Water Quality Bureau  
New Mexico State Land Office  
U.S. Fish and Wildlife Service - Ecological Services  
U.S. Fish and Wildlife Service - Fishery Resources Office

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## **FINDING OF NO SIGNIFICANT IMPACT/RATIONALE**

### **DOI-BLM-NM-P010-2013-53-EA**

I have determined that the BLM Preferred Alternative (Alternative A), as described in the Environmental Assessment (EA) will not have any significant impact, individually or cumulatively, on the quality of the human environment. Because there would not be any significant impact, an environmental impact statement is not required. The NEPA handbook (p. 83) indicates that the FINDING OF NO SIGNIFICANT IMPACT (FONSI) must succinctly state the reasons for deciding that the action will have no significant environmental effects. It also recommends that the FONSI address the relevant context and intensity factors.

In making this determination, I considered the following factors:

1. The activities described in the BLM Preferred Alternative (Alternative A) do not include any significant beneficial or adverse impacts (40 CFR 1508.27(b)(1)). The EA includes a description of the expected environmental consequences of issuing a 10 year term grazing permit on Allotment 65020.
2. The activities included in the proposed action would not significantly affect public health or safety (40 CFR 1508.27(b)(2)).
3. The proposed activities would not significantly affect any unique characteristics (40 CFR 1508.27(b)(3)) of the geographic area such as prime and unique farmlands, caves, wild and scenic rivers, designated wilderness areas or wilderness study areas.
4. The activities described in the proposed action do not involve effects on the human environment that are likely to be highly controversial (40 CFR 1508.27(b)(4)).
5. The activities described in the proposed action do not involve effects that are highly uncertain or involve unique or unknown risks (40 CFR 1508.27(b)(5)).
6. My decision to implement these activities does not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration (40 CFR 1508.27(b)(6)).
7. The effects of issuing a ten year permit would not be significant, individually or cumulatively, when considered with the effects of other actions (40 CFR 1508.27(b)(7)). The EA discloses that there are no other connected or cumulative actions that would cause significant cumulative impacts.
8. I have determined that the activities described in the proposed action will not adversely affect or cause loss or destruction of scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places (40 CFR 1508.27(b)(8)). Cultural resource surveys in the allotment have been generally limited to inspections ahead of oil and gas related activities, such as well locations and pipelines. Many areas of the allotment have been generally inventoried for cultural resources. The existing cultural data for the allotment and adjacent areas seems to be a good example of what can be reasonably expected to occur in the remainder of the allotment. No site-specific situations are known to exist where current grazing practices conflict with cultural resource preservation and management. Some mitigation is included in the proposed action to protect cultural resources from grazing practices, such as: "In the event that grazing practices are determined to have an adverse effect on cultural resources within the allotment, the BLM, in consultation with the permittee, will take action(s) to mitigate or otherwise negate the effects. This may include but is not limited to installing physical barriers to protect the affected cultural resources, relocating the livestock grazing practice(s) that is (are) causing the adverse effect(s), or any other treatment

as appropriate. Page 27 of the EA describes the affected environment and impacts of the proposed action and alternatives on cultural resources.

9. The proposed activities are not likely to adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (40 CFR 1508.27(b)(9)). Within the allotment there are no known populations of threatened and endangered species, or designated critical habitat within the allotment.

10. The proposed activities will not threaten any violation of Federal, State, or local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(10)). Page 4 of the EA describes the conformance with land use plans and relationships to statutes, regulations, or other plans.

**APPROVED:**

/s/ Jerry Dutchover  
Jerry Dutchover  
Assistant Field Manager, Resources

11/14/2014.  
Date

## DECISION RECORD

### DOI-BLM-NM-P010-2013-53-EA

Proposed Decision: It is my decision to implement the BLM-Preferred Alternative as described in DOI-BLM-NM-P010-2013-053-EA and to issue permit for the allotment analyzed in this document. The mitigation measures identified in the attached EA have been formulated into terms and conditions that will be attached to the grazing permit. This decision incorporates, by reference, those conditions identified in the attached Environmental Assessment. A summary table follows:

<b>Table 1. Animal Units/Animal Unit Months</b>							
<b>Allotment Number</b>	<b>Allotment Name</b>	<b>Acres of Public Land</b>	<b>Percent Public Land</b>	<b>Animal Units Authorized</b>	<b>Animal Unit Months Authorized</b>	<b>Livestock</b>	<b>Livestock Number</b>
65020	Bosque Grande	6,290	60%	174	1253	Cattle	174
65020	Bosque Grande			1	7	Horse	1
<b>Totals</b>		<b>6,290</b>		<b>175</b>	<b>1260</b>		<b>175</b>

Continue to cooperatively implement the allotment management plan to include seasonal use of the riparian area along the Pecos River, and the implementation of a rest-rotation grazing system.

Rationale: Based on the rangeland health assessments (RHAs) and previous monitoring, resource conditions on this allotment are sufficient and sustainable to support the level of use outlined in the term grazing permit.

The Proposed Action will be in compliance with the 1997 Roswell Resource Management Plan and Record of Decision and the 2001 New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management.

If you wish to protest this proposed decision in accordance with 43 CFR 4160.2, you are allowed 15 days to do so in person or in writing to the authorized officer, after the receipt of this decision. Please be specific in your points of protest.

The protest shall be filed with the Field Manager, Bureau of Land Management, 2909 West 2<sup>nd</sup>, Roswell, NM 88201. This protest should specify, clearly and concisely, why you think the proposed action is in error.

In the absence of a protest within the time allowed, the above decision shall constitute my final decision. Should this notice become the final decision, you are allowed an additional 30 days within which to file an appeal for the purpose of a hearing before the Interior Board of Land Appeals, and to petition for stay of the decision pending final determination on the appeal (43 CFR 4.21 and 4.410). If a petition for stay is not requested and granted, the decision will be put into effect following the 30-day appeal period. The appeal and petition for stay should be filed with the Field Manager at the above address. The appeal should specify, clearly and concisely, why you think the decision is in error. The petition for stay should specify how you will be harmed if the stay is not granted.

/s/ Jerry Dutchover  
Jerry Dutchover  
Assistant Field Manager

11/14/2014  
Date